

A Cross Sectional Survey Related to the Habits and Lifestyle Associated With Obesity in Children at a Tertiary care Teaching Centre

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ABSTRACT

Background: According to WHO, obesity and overweight are defined as abnormal and excessive fat accumulation in body, which poses a significant risk to health. Awareness about childhood obesity is the key to control this chronic condition. The present study was conducted with the aim to determine the lifestyle habits associated with obesity and determine the prevalence of factors associated with obesity.

Materials and Methods: This prospective cross sectional study was conducted Rajshree Medical Research Institute & Hospital, Bareilly, Uttar Pradesh (India). It was a questionnaire based survey that involved 300 children who were aged between 6-16 years. This study was divided into two groups- Group I consisted of children aged between 6-11 years and Group II consisted of children aged between 12-16 years. A questionnaire containing information about demographic details, BMI, eating habits, physical exercise, and sedentary habits were filled by the Participants. Data thus obtained was analyzed using SPSS software.

Results: In Group I there were 63% males and 37% females. In group II, there were 57% males and 43% females. In group I and Group II, 68% and 65% of the children resided in urban areas respectively. In 42% of the subjects of Group I, there was a family history of obesity and in 36% of subjects aged between 16-21 years there was a family history of obesity. In

Group I, 68% of the subjects daily had fast food daily and 60% of subjects in Group II had fast food daily. Only 2% of subjects in Group I and 3% of subjects in Group II occasionally had fast food. Intake of fast food is significantly related to the risk of obesity ($p < 0.05$).

Conclusion: From the present study we concluded that with day to day modernization more and more children are adopting sedentary habits and this is becoming an important risk factor for obesity.

Keywords: Awareness, Obesity, Prospective, Risk.

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INTRODUCTION

According to WHO, obesity and overweight are defined as abnormal and excessive fat accumulation in body, which poses a significant risk to health.¹ It is a major public health burden worldwide. Although initially it was considered a problem in developed countries but now a day been even developing countries have high incidence of obesity.² Obesity is multifactorial which is due to imbalance between calorie intake and calorie expenditure. Obesity is a major risk factor for various chronic diseases like diabetes, hypertension and cardiovascular problems.^{3,4} Obesity during childhood is associated with increased risk of premature deaths and disability during adulthood. Children are at a higher risk of developing breathing difficulties, fractures and insulin resistance.⁵ Adolescence acts as a critical phase of developing obesity due to widespread change in biological, social and psychological environment.⁶⁻⁹ For prevention of adult obesity, it is essential to prevent and manage childhood obesity.

Awareness about childhood obesity is the key to control this chronic condition. The present study was conducted with the aim to determine the lifestyle habits associated with obesity and determine the prevalence of factors associated with obesity.

MATERIALS AND METHODS

This prospective cross sectional study was conducted in the Department of Paediatrics, Rajshree Medical Research Institute & Hospital, Bareilly, Uttar Pradesh (India). It was a questionnaire based survey that involved 300 children who were aged between 6-16 years. The schools for the area of survey were selected by convenience sampling while the children were selected by Stratified sampling methods. Only children who were obese were included in the study. This study was divided into two groups- Group I consisted of children aged between 6-11 years and Group II consisted of children aged between 12-16 years. The study was

approved by the Institute's ethical board and a written informed consent was obtained from both children and their teachers. Children with any physical or mental illness, preexisting chronic disease, endocrinal disorder or severe malnutrition were excluded from the study. A questionnaire containing information about demographic details, BMI, eating habits, physical exercise, and

sedentary habits were filled by the students. Both Group I and Group II were compared. Data thus obtained was analyzed using SPSS software.

The data was arranged in a tabulated form. Chi square test was applied as a test of significance. Probability value of less than 0.05 was considered significant.

Table 1: Compiled result of the study

		Group I	Group II	P value
Sex	Male	63%	57%	>0.05
	Female	37%	43%	
Background	Urban	68%	65%	>0.05
	Rural	32%	35%	
Family history of obesity	Yes	42%	36%	>0.05
	No	58%	64%	
Physical activity	Yes	70%	42%	>0.05
	No	30%	58%	
Walk	Daily	1%	2%	>0.05
	Occasionally	15%	12%	
	Never go for walk	84%	86%	
Videogames	Do not	9%	6%	<0.05
	Occasionally	5%	11%	
	Once in a week	2%	7%	
	Daily	84%	76%	
Watching television	>3 hours	25%	35%	>0.05
	Between 1-3 hours	65%	36%	
	Less than 1 hour	10%	29%	
Fast food	Daily	68%	60%	<0.05
	Once a week	15%	15%	
	Twice a week	15%	22%	
	Occasionally	2%	3%	
Aerated drinks	Daily	47%	70%	<0.05
	Occasionally	2%	1%	
	Once a week	23%	18%	
	Thrice a week	28%	11%	
Obesity is dangerous	Yes	88%	99%	>0.05
	No	12%	1%	

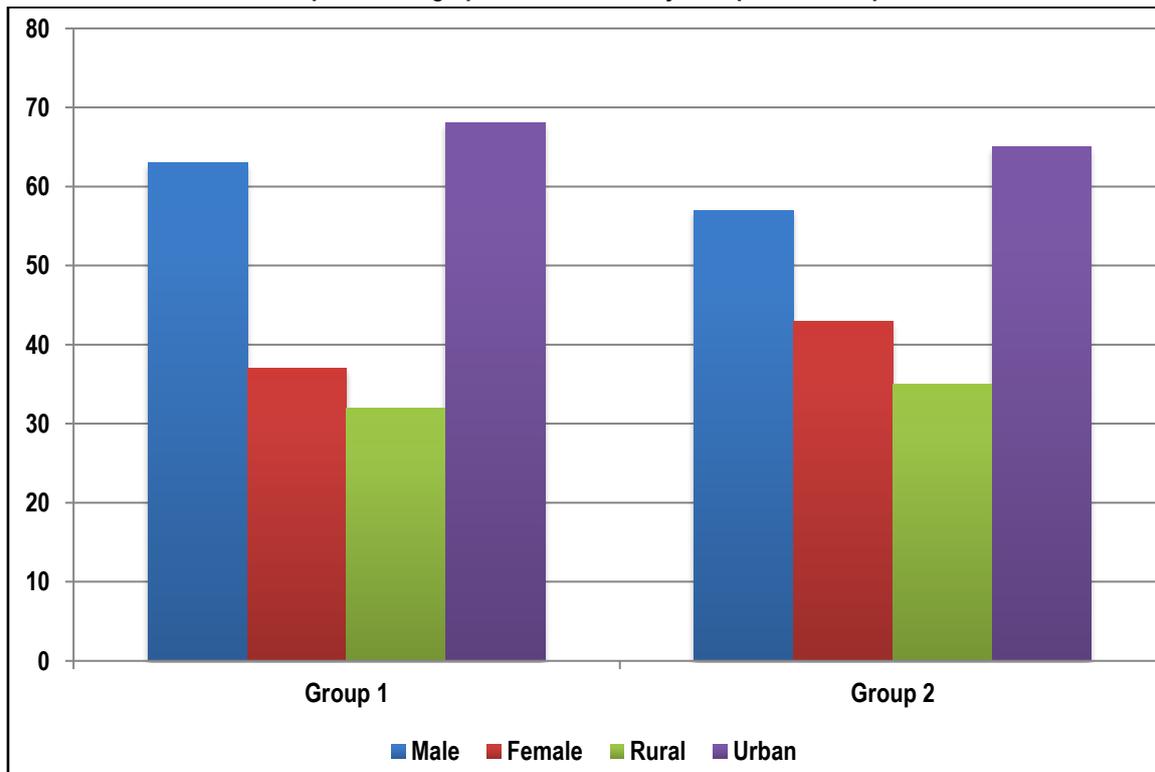
RESULTS

The present study involved 300 subjects with the mean age of 16.21 ± 4.81 years. Table 1 shows the compiled result of the study. In Group I there were 63% males and 37% females. In group II, there were 57% males and 43% females. Majority of males were obese but there was no significant difference in both the groups. In group I and Group II, 68% and 65% of the children resided in urban areas respectively. In 42% of the subjects of Group I, there was a family history of obesity and in 36% of subjects aged between 16-21 years there was a family history of obesity. But there was no significant difference in family history amongst both the groups ($p>0.05$).

There were 9% of children in Group I who never played video games and 84% of the subjects played video games daily. In Group II, there were 7% of subjects who never played video

games and 76% of subjects who played video games daily. There was a significant difference between the sedentary habits of both the groups ($p<0.05$). In Group I, 68% of the subjects daily had fast food and 60% of subjects in Group II had fast food daily. Only 2% of subjects in Group I and 3% of subjects in Group II occasionally had fast food. Intake of fast food is significantly related to the risk of obesity ($p<0.05$). There were 47% of children in Group I who consumed aerated drinks daily and 70% subjects in Group II consumed aerated drinks daily. There were 2% children in Group I who occasionally had intake of aerated drinks. There was a significant difference in both the groups. The next question in questionnaire was related to the awareness about obesity. There were 88% of children in Group I and 99% of children in Group II who knew that obesity is dangerous for health.

Graph 1: Demographic details of study Group 1 and Group 2



DISCUSSION

In the past year the chief area of concern for government was to eradicate poverty and malnourishment among children. People use to think that the bigger the better. But this misconception has to be removed. Since childhood obesity is increasing at an alarming rate, it has become a global health problem worldwide.¹⁰ The present study indicates that sedentary habits, consumption of fast food and aerated drinks are associated with potential risk of obesity. In our study more male students were overweight which were consistent with the results conducted in Pakistan and China.¹¹⁻¹³ In our study there was significant correlation between obesity and dietary habits. In a study conducted by Triches et al¹⁴ to find the relationship between eating habits and obesity in school children, they found that obesity was more prevalent in children who had little knowledge about nutrition and adopted unhealthy eating habits. It is not the volume of food that is related to obesity but also the quality of food that matters. The food habits of children are greatly influenced by peers, family and care givers. Various programs that are conducted to eradicate childhood obesity should aim at dietary change and knowledge about nutrition.¹⁵ In a study conducted by Jagadesan et al¹⁶ to determine the prevalence of overweight amongst school children of Chennai, he found out a higher prevalence of obesity and hypertension amongst children of private schools. In the present study was significantly decreased number of children in higher age groups who opted for physical activity whereas they were more interested in video games. Therefore lifestyle plays an important role in obesity. The chief limitations of our study were smaller sample size and the study was conducted in a particular school. Large sample size needs to be addressed to determine the burden of the disease. We should take this problem of childhood obesity seriously before it turns out to be a epidemic.

CONCLUSION

From the present study we can conclude that modernization more and more children are adopting sedentary habits and this is becoming an important risk factor for obesity. An unhealthy eating habit with consumption of fermentable carbohydrates is further worsening the condition.

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